

REMARKS:

Examiner Hylton is thanked for the courtesy of an interview on October 6, 2004, and for withdrawal of the finality of the previous Office Action. The following references were discussed during the interview: U.S. Patent Nos. 3,682,345 to Baugh; 3,136,148 to Nehls, 4,160,511 to Hukuta et al.; and 5,901,869 to Ohmura et al. Although no agreement was reached during the interview, numerous arguments were presented distinguishing the art of record. Proposed amendments to claim 1 were discussed. In addition, the Examiner suggesting incorporating language into claim 1 to provide that the locking device increases resistance in both directions of movement of the cap (i.e. when the cap is both installed and removed from the filler neck).

Applicants have amended claim 1 to provide that the locking device is located at the region of transition. In addition, amended claim 1 also provides that the locking device increases the resistance to movement of the closure cap when the engagement elements are within the region of transition when bringing the closure cap with respect to the filler neck from either the initial position into the final position or the final position into the initial position. In other words, the locking device increases resistance when the engagement elements are within the transition region either when the cap is being installed as the cap moves from the initial position to the final position, or when the cap is being removed as the cap moves from the final position back to the initial position. Thus, resistance is increased within the transition region regardless of whether the engagement elements approached the transition region from the initial position, or from the final position.

Applicants have also amended independent claim 15 to provide that the locking strut increases resistance to movement of the closure cap when bringing the engagement projection within the region of transition either from the axial path (i.e. as the cap is being installed on the filler neck), or from the circumferential path (i.e. as the cap is being removed from the filler neck). All remaining claims depend from amended claims 1 or 15. No new matter has been added. None of the prior art of record discloses a filler device as claimed by Applicants.

Claims 1-6 and 15 were rejected as being anticipated by Ohmura et al. As discussed during the interview, Ohmura fails to provide for a filler device as claimed by Applicants. Specifically, the device disclosed in Ohmura does not include engagement elements which move along a movement region having an axial path, a circumferential path, and a transition region between the axial and circumferential paths, wherein a locking device increases resistance to movement when the engagement elements are within the region of transition.

To the contrary, Ohmura provides for locking members that slide in the radial direction from the pillar shaped portion. See column 6, lines 31-33. Thus, there is no region of transition such as claimed by Applicants. Furthermore, Ohmura fails to provide for engagement elements which may be moved along a circumferential path such as claimed by Applicants. Rather, Ohmura provides that the cap is axially aligned by way of a positioning protrusion 2A. The cap is then maintained in a final axial position, and key-actuated locking struts extend outwardly. Even if the final axial position were considered the transition region, which it is not, resistance to movement is provided only

when the locking struts are extended outwardly away from the final axial position. Thus, there is no resistance to movement at a region of transition.

Finally, Ohmura fails to disclose or suggest a filler cap configuration wherein the locking device increases resistance to movement at the transition region both when the cap is being installed, as well as when the cap is being removed (i.e. in both directions). As discussed during the interview, Applicants have included additional language in claims 1 and 15 to provide for this feature.

With respect to claim 15, Applicants also note that Ohmura fails to disclose or suggest a cap having a locking strut with an axial ramp for generating resistance when the engagement projection is inserted into the axial path, and a circumferential ramp for generating resistance when the engagement projection is rotated circumferentially in the circumferential path.

Claims 1-6 were also rejected as being anticipated by Hukuta et al. Hukuta et al. discloses a similar locking cap to Ohmura, including a pair of locking bars that extend outwardly and engage a lid after the cap is inserted in the corresponding opening. Thus, the cap in Hukuta et al. is locked in place when the bars are away from the opening, and does not provide for a locking device which increases resistance at a region of transition, as claimed by Applicants. Even if there were a corresponding transition region, which there is not, Ohmura would fail to provide a locking device that increases resistance to movement at the transition region both when the cap is being installed, as well as when the cap is being removed (i.e. in both directions). Applicants have amended claims 1 and 15 to provide for this feature.

Claims 1-6 and 14 were rejected as being anticipated by Nehls. A similar structure is again provided in Nehls, wherein latch bolts extend radially outward to lock the cap in place. The apparatus of Nehls also fails to provide for a locking device located at a region of transition from the axial path to the circumferential path. Nehls also fails to provide for a transition region through which engagement elements pass, wherein the locking device increases resistance to movement of the closure cap when the engagement elements are within this region of transition.

During the interview, the Examiner suggested that the apparatus disclosed by Nehls would provide for an increase in resistance when the latch bolts are within the region of transition because the latch bolts are biased outwardly by springs 24. This outward biasing of the latch bolts does not correspond to the resistance to movement in the transition region because Nehls does not include a transition region. There is no circumferential path provided in Nehls. In fact, the apparatus disclosed by Nehls prevents circumferential movement. Specifically, Nehls provides: "In order to prevent rotation of the cap under such conditions, I provide in one of the ribs 26 a pin 50 which is yieldably biased upwardly from the upper end of rib 26 under the influence of a compression spring 52 trapped beneath the pin." See column 3, lines 43-47. Thus, there cannot be a circumferential path as claimed by Applicants, and therefore no transition region as claimed by Applicants.

In any event, amended claims 1 and 15 now provide for an increase in resistance to movement when the engagement elements are within the region of transition when bringing the closure cap from either the initial position into the final position (i.e. when

installing the cap) or the final position into the initial position (i.e. when removing the cap). Nehls clearly fails to provide for such a feature.

Claims 1-6, 9-16, 18 and 19 were rejected as being anticipated by Baugh. This reference was previously cited in a previous Office Action, and discussed during a first interview. While no agreement was reached during the first interview, Bauch was specifically discussed. It was noted in the Interview Summary that “the proposed amendment to the claims appears to overcome the art previously made of record”.

Baugh fails to disclose a filler device having a locking device that increases resistance in a transition region between an axial path and a circumferential path. Rather, Baugh discloses a conventional screw-cap design. Baugh fails to disclose or suggest a locking device located in the region of transition. Finally, Baugh fails to disclose or suggest a locking device that increases resistance both when the cap is being installed, as well as when the cap is being removed (i.e. in both directions).

Claim 17 was rejected as being obvious over Ohmura. Claim 17 depends from amended claim 15. As such, Applicants reassert all those arguments set forth above. Furthermore, Ohmura fails to disclose or suggest a cap having a locking strut with an axial ramp for generating resistance when the engagement projection is inserted into the axial path, and a circumferential ramp for generating resistance when the engagement projection is rotated circumferentially in the circumferential path, as provided in claim 15.

In light of the amendments and arguments herein, as well as those discussed during the interview, Applicants submit that all rejections have been overcome. Allowance of all pending claims is respectfully requested.

Applicants submit herewith a Request for an Extension of Time for two (2) months, along with the requisite fee. It is believed that no other fees are due with this submission. Should that determination be incorrect, then please debit Account No. 50-0548 and notify the undersigned.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'W. Schrot', written in a cursive style.

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